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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,583	04/12/2004	Richard Hutchison	ITW 7247.63	2647
23721	7590	07/06/2005	EXAMINER	
CORRIGAN LAW OFFICE 5 BRIARCLIFF CT APPLETON, WI 54915			SHAW, CLIFFORD C	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/822,583

Applicant(s)

HUTCHISON ET AL.

Examiner

Clifford C. Shaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 48-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 48-50, 54-57, 59-63 and 65-67 is/are rejected.
- 7) ☒ Claim(s) 51-53, 58 and 64 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**Detailed Action**

1.) In a communication mailed on 5/11/2005, applicant was informed that the current application has been withdrawn from issue. Applicant is advised that the claims have been reconsidered and not all are deemed to patentably distinguish over the Ogasawara et al. patent (4,546,234, previously applied). A new rejection is presented below.

2.) Claims 66 and 67 are objected to. These claims are duplicates of each other. Applicant is to correct this situation.

3.) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.) Claims 48-50, 54-57, 59-63, and 65-67 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogasawara et al. (4,546,234). Figures 3, 8, and 11 and the discussion at columns 4-6 and 10-14 of the patent to Ogasawara et al. (4,546,234) disclose a method and apparatus for short circuit transfer welding with features claimed including a power source 101 or 20, a feedback circuit with voltage and current inputs at elements 6-18 in figure 8 or elements 111-116 in figure 11, a controller necessarily associated with the output of the feedback circuit to control the power supply to produce two separate waveforms, one for the short circuiting output mode,

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the other for the arcing mode. The short circuit waveform in Ogasawara et al. (4,546,234) is clearly controlled to have a distinct current waveform (see for example, the short circuit portion of the figure 3 current waveform). In regard to the claimed “desired and controlled voltage waveform”, note that in column 14, lines 1-50, Ogasawara et al. (4,546,234) teaches a constant potential waveform portion during the arcing phase. In regard to claim 50, note the comparator features discussed in column 10 of Ogasawara et al. (4,546,234). In regard to claims 59 and 65, see column 11 of Ogasawara et al. (4,546,234) where the relationship of deposition and wire feed speed is discussed and note that the control based on the “distance from the tip of the wire to the workpiece” is equivalent to control based on the arcing voltage or lack thereof between the wire tip and workpiece.

5.) Claims 51-53, 58, and 64 are objected to for depending from rejected claims, but would be given favorable consideration if recast in independent form to include all of the limitations of the parent claims. None of the prior art of record teaches or suggests the limitations associated with determining the heat input to each drop as set forth in the claims and combined with the other claim features.

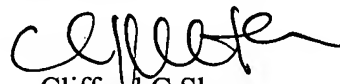
6.) In his “Remarks” filed on 1/19/2005, applicant argues that the Ogasawara et al. (4,546,234) patent does not teach a waveform having a controlled and desired voltage profile. However, the embodiment discussed in column 14 of Ogasawara et al. (4,546,234) does teach the use of a constant potential waveform, satisfying the claims as discussed in the rejection above.

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Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clifford C Shaw  
Primary Examiner  
Art Unit 1725

July 1, 2005